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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER	
BATTAGLIA, MICHAEL V	
ART UNIT	**PAPER NUMBER**
2652	

DATE MAILED: 10/19/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/774,404	SEO ET AL.	
	Examiner	Art Unit	
	Michael V. Battaglia	2652	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *27 July 2005*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-18* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-18* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless -
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-18 are rejected under 35 U.S.C. 102(b) as being anticipated by Fitzpatrick et al (hereafter Fitzpatrick) (US 5,757,735).

In regard to claim 1, Fitzpatrick discloses an adaptive writing method of writing input data on a recording medium (Fig. 6, element 670) using a write pulse waveform ("laser control codes" of Col. 5, lines 55 and Col. 7, lines 28) including a first pulse, a last pulse and a multi-pulse train (Tables 1 and 2 of Cols. 8-9, particularly the laser control codes for 6T-8T mark lengths, and note that each consecutive series of 1's is a pulse (Col. 5, lines 60-65)), comprising: controlling the write pulse waveform based on a grouping table (Fig. 3, elements 340a and 340b) to generate an adaptive write pulse waveform (Fig. 6, "Pulses" and Col. 9, lines 26-29 and 53-56), the grouping table storing width data of the first and/or last pulses of the write pulse waveform (number of consecutive 1's for the first and last pulses of the write pulse waveform determines width of first and last pulses) varying according to corresponding stored values of lengths of marks to be written (the width data in Tables 1 and 2 of Cols. 8-9 of the first and/or last pulses of the write pulse waveform vary as the length of the mark to be written progresses from 2T to 8T); and writing input data on the recording medium using the adaptive write pulse waveform (Fig. 6 and Col. 5, lines 53-58), wherein the generated adaptive write pulse waveform is generated without regard for a trailing space of a present mark being written using the adaptive write pulse waveform (Col. 9, lines 24-56).

It is noted that Fig. 4 shows the widths of the first and last pulses of the write pulse waveform varied to adapt to the presence or lack of residual heat (Col. 8, lines 20-26 and Col. 11, lines 13-21) and the write pulse waveform output by element 620 of Fig. 6 is therefore an adaptive write pulse waveform.

In regard to claim 2, Fitzpatrick discloses that the grouping table stores the width data of the first and/or last pulses for the write pulse waveform by grouping a length of a present mark and a length of a leading space of the present mark into corresponding pulse groups (each "laser control code" of Tables 1 and 2 of Cols. 8-9 is a pulse group) according to corresponding lengths of the present mark (lengths 2T-8T of Tables 1 and 2 of Cols. 8-9) and leading space ("last written space" of Col. 9, lines 38-51).

In regard to claim 3, Fitzpatrick discloses an adaptive writing method of writing input data on a recording medium (Fig. 6, element 670) using a write pulse waveform ("laser control codes" of Col. 5, lines 55 and Col. 7, lines 28) including a first pulse, a last pulse and a multi-pulse train (Tables 1 and 2 of Cols. 8-9, particularly the laser control codes for 6T-8T mark lengths, and note that each consecutive series of 1's is a pulse (Col. 5, lines 60-65)), comprising: controlling the write pulse waveform based on a grouping table (Fig. 3, elements 340a and 340b) having width data grouped in pulse groups (each "laser control code" of Tables 1 and 2 of Cols. 8-9 is a pulse group) which group the first and/or last pulses of the write pulse waveform by corresponding lengths of a present mark (lengths 2T-8T of Tables 1 and 2 of Cols. 8-9) of input data and a leading space ("last written space" of Col. 9, lines 38-51) of the present mark to generate an adaptive write pulse waveform (Fig. 6, "Pulses" and Col. 9, lines 26-29 and 53-56); and writing the input data on the optical recording medium using the adaptive write pulse waveform (Fig. 6 and Col. 5, lines 53-58). It is noted that Fig. 4 shows the widths of the first and last pulses of the write pulse waveform varied

to adapt to the presence or lack of residual heat (Col. 8, lines 20-26 and Col. 11, lines 13-21) and the write pulse waveform output by element 620 of Fig. 6 is therefore an adaptive write pulse waveform.

In regard to claim 4, Fitzpatrick discloses an adaptive writing method of writing input data on a recording medium (Fig. 6, element 670) using a write pulse waveform ("laser control codes" of Col. 5, lines 55 and Col. 7, lines 28) including a first pulse, a last pulse and a multi-pulse train (Tables 1 and 2 of Cols. 8-9, particularly the laser control codes for 6T-8T mark lengths, and note that each consecutive series of 1's is a pulse (Col. 5, lines 60-65)), comprising: controlling the write pulse waveform based on a grouping table (Fig. 3, elements 340a and 340b) to generate an adaptive write pulse waveform (Fig. 6, "Pulses" and Col. 9, lines 26-29 and 53-56), the grouping table storing width data of the first and/or last pulses of the write pulse waveform (number of consecutive 1's for the first and last pulses of the write pulse waveform determines width of first and last pulses) grouped in corresponding pulse groups (each "laser control code" of Tables 1 and 2 of Cols. 8-9 is a pulse group) according to lengths of marks to be written (lengths 2T-8T of Tables 1 and 2 of Cols. 8-9) and/or lengths of spaces ("last written space" of Col. 9, lines 38-51) adjacent to the marks to be written; and writing input data on the recording medium using the adaptive write pulse waveform (Fig. 6 and Col. 5, lines 53-58). It is noted that Fig. 4 shows the widths of the first and last pulses of the write pulse waveform varied to adapt to the presence or lack of residual heat (Col. 8, lines 20-26 and Col. 11, lines 13-21) and the write pulse waveform output by element 620 of Fig. 6 is therefore an adaptive write pulse waveform.

In regard to claim 5, Fitzpatrick discloses that the controlling the write pulse waveform comprises determining from the input data a length of a present mark to be written (Col. 6, lines 29-55), and selecting from the grouping table one of the width data of the first and/or last pulses of

the write pulse waveform which is associated with a length of a mark which corresponds to the determined length (Col. 9, lines 52-55).

In regard to claim 6, Fitzpatrick discloses that the controlling the write pulse waveform further comprises determining from the input data a length of a space adjacent to a present mark to be written (Col. 6, lines 29-55), and selecting from the grouping table one of the width data of the first and/or last pulses of the write pulse waveform which is associated with a length of a space which corresponds to the determined length (Col. 9, lines 28-55).

In regard to claim 7, Fitzpatrick discloses that the controlling the write pulse waveform further comprises determining from the input data another length of a space adjacent to the present mark to be written (Col. 6, lines 29-55), and the selecting from the grouping table comprises selecting one of the width data of the first and/or last pulses of the write pulse waveform which is associated with both a length of a mark which corresponds to the determined length and a length of a space which corresponds to the another determined length (Col. 9, lines 28-55).

In regard to claim 8, Fitzpatrick discloses that the controlling the write pulse waveform comprises determining from the input data a length of a present mark to be written (Col. 6, lines 29-55), and selecting from the grouping table one of the width data of the first and/or last pulses of the write pulse waveform which is associated with a stored length value of a mark to be written which corresponds to the determined length (Col. 9, lines 52-55).

In regard to claim 9, Fitzpatrick discloses that the controlling the write pulse waveform comprises determining from the input data a length of a lead space of a present mark to be written (Col. 6, lines 29-55), and selecting from the grouping table one of the width data of the first and/or last pulses of the write pulse waveform which is associated with a stored length value of the leading space which corresponds to the determined length (Col. 9, lines 28-55).

In regard to claim 10, Fitzpatrick discloses that the controlling the write pulse waveform comprises determining from the input data another length of a leading space adjacent to the present mark (Col. 6, lines 29-55), and the selecting from the grouping table comprises selecting one of the width data of the first and/or last pulses of the write pulse waveform which is associated with both a stored length value of a mark which corresponds to the determined length and a stored length value of the space which corresponds to the another determined length (Col. 9, lines 28-55).

In regard to claim 11, Fitzpatrick discloses that the controlling the write pulse waveform comprises determining from the input data a length of a present mark to be written (Col. 6, lines 29-55), and selecting from the grouping table one of the width data of the first and/or last pulses of the write pulse waveform which is associated with a length of a mark which corresponds to the determined length (Col. 9, lines 52-55).

In regard to claim 12, Fitzpatrick discloses that the controlling the write pulse waveform comprises determining from the input data a length of a space adjacent to a present mark to be written (Col. 6, lines 29-55), and selecting from the grouping table one of the width data of the first and/or last pulses of the write pulse waveform which is associated with a length of a space which corresponds to the determined length (Col. 9, lines 28-55).

In regard to claim 13, Fitzpatrick discloses that the controlling the write pulse waveform comprises determining from the input data another length of a space adjacent to the present mark to be written (Col. 6, lines 29-55), and the selecting from the grouping table comprises selecting one of the width data of the first and/or last pulses of the write pulse waveform which is associated with both a length of a mark which corresponds to the determined length and a length of the space which corresponds to the another determined length (Col. 9, lines 28-55).

In regard to claim 14, Fitzpatrick discloses that the generated adaptive write pulse waveform is generated according to the lengths of the present mark and the leading space regardless of a length of a trailing space of the present mark (Col. 9, lines 28-55).

In regard to claims 15 and 17, Fitzpatrick discloses that the pulse groups comprise a short pulse group (3T length group of Table 2 of Cols. 8 and 9 and Col. 8, lines 5-7) and another pulse group (5T length group of Table 2 of Cols. 8 and 9), each member of the another pulse group having lengths greater than each member of the short pulse group (Table 2 of Cols. 8 and 9).

In regard to claim 16, Fitzpatrick discloses that the present mark comprises another adjacent space other than the adjacent space such that the present mark is between the adjacent space and the another adjacent space (Col. 6, lines 29-55); and the generated adaptive write pulse waveform is generated according to the lengths of the present mark and the adjacent space regardless of a length of the another adjacent space of the present mark (Col. 9, lines 28-55).

In regard to claim 18, Fitzpatrick discloses that the grouping table pulse groups comprise a short pulse group (2T length group of Table 1 of Col. 8 and Col. 8, lines 5-7) and another pulse group (8T length group of Table 1 of Col. 8).

Response to Arguments

2. Applicant's arguments with respect to claims 1-18 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

3. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, THIS ACTION IS MADE FINAL. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael V. Battaglia whose telephone number is (571) 272-7568. The examiner can normally be reached on 5-4/9 Plan with 1st Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hoa T. Nguyen can be reached on (571) 272-7579. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Michael Battaglia

BRIAN E. MILLER
PRIMARY EXAMINER